

Remarks

Applicants have carefully reviewed the Office Action dated November 8, 2001. With this Amendment, Applicants have amended independent claim 49. Claims 49-74 remain pending in this application.

35 U.S.C. § 102 Rejections

Claims 49-55 and 61-64 were rejected under 35 U.S.C. § 102(e) as being anticipated by Sirhan et al. (U.S. Patent No. 5,743,875). In the Office Action, the Examiner asserts that *Sirhan et al.* disclose Applicants' claimed invention, citing to column 5 which provides in part:

The structure of the most distal portion of the catheter shaft 31 is quite similar to the embodiment shown in FIGS. 1-5 in that the distal section of the catheter shaft 31 includes an outer tubular member 32 which is disposed about an inner tubular member 33 and which in part takes the shape of and is secured to the exterior of the inner tubular member along a length 34 of the distal shaft

(*Sirhan et al.*, column 5, lines 49-56). According to the Examiner, Figure 6 "clearly shows, at length (34), that the outer surface of tubular member (32) is bonded to the outer surface of second tube (33)." The Examiner further states that column 3, lines 17-23 of *Sirhan et al.* provide that the tubular members may be secured together by, for example, heat bonding.

Applicants respectfully assert that *Sirhan et al.* does not anticipate Applicants' claimed invention. *Sirhan et al.* appear to disclose a catheter shaft 31 having an outer tubular member 32, an inner tubular member 33, and an inflation lumen 36 in fluid communication with a balloon 37. As shown in Figure 6, inner tubular member 33 defines a port 42 and inner lumen 40 for insertion of a guidewire 43.

While *Sirhan et al.* appear to disclose that the outer tubular member 32 may be disposed about and secured to the inner tubular member 33, *Sirhan et al.* does not disclose a bonding region wherein the outside wall surface of the outer tubular member is bonded by re-flow to the

outside wall surface of the inner tubular member. Indeed, *Sirhan et al.* appear to disclose the exact opposite arrangement. For example, *Sirhan et al.* recite:

As shown in FIGS. 1 and 3, the distal portion of the outer tubular member 13 in part takes the shape of and is secured to the exterior of the inner tubular member 12 along the length 18.

(*Sirhan et al.*, column 4, line 66-column 5, line 2). Figures 1 and 3, in turn, clearly show that the inside wall surface of outer tubular member 13 is coupled to the outside wall surface of inner tubular member 12. With respect to the embodiment illustrated in Figure 6, *Sirhan et al.* disclose in column 5, lines 51-56 that the structure of the distal portion of the catheter shaft 31 at the bonding region is similar to the embodiment shown in FIGS. 1-5. Thus, *Sirhan et al.* appear to disclose that the outside wall surface of inner tubular member 33, similar to the embodiment illustrated in Figures 1-5, is disposed about and is secured to the inside wall surface of outer tubular member 32.

In contrast, Claim 49 recites:

49. (Twice Amended) A catheter shaft comprising:

a first tube including an inflation lumen in fluid contact with a dilation balloon, an inside wall surface, an outside wall surface, and a first tube length, said first tube having an orifice in a portion of said first tube;

a second tube inserted through, and extending distally from, said orifice inside said inflation lumen, said second tube having a length, a lumen therethrough, a proximal portion, an inside wall surface and an outside wall surface; and

a bonding region wherein said second tube outside wall surface is bonded to said first tube outside wall surface by re-flow of the first and second tube outside wall surfaces, said second tube inside wall surface being formed of a second, lubricious material for a majority of said second tube length, said first tube wall having a layer of a first, flexible material extending for a majority of said first tube length, said first material being different from said second material.

(emphasis added).

As can be seen readily seen, Claim 49 recites a bonding region wherein the outside wall

surface of the second tube is bonded to the outside wall surface of the first tube by re-flow of the first and second outside wall surfaces. Unlike the claimed invention, *Sirhan et al.* does not disclose the bonding of the outside wall surface of the inner tube to the outside wall surface of the outer tube. Neither the drawings nor the specification in *Sirhan et al.* disclose this arrangement. In fact, as discussed *supra*, *Sirhan et al.* appear to disclose the exact opposite bonding arrangement wherein the inside wall surface of the outer tubular member is bonded to the outside wall surface of the inner tubular member.

The mere fact that the inner and outer tubes in *Sirhan et al.* may be bonded together in the manner set forth in the claimed invention is not sufficient to satisfy an anticipation rejection under 35 U.S.C. § 102. *See MPEP at § 2112.01.* Instead, to satisfy an anticipation rejection, the prior art reference must disclose the identical or substantially identical structure of the claimed invention. *See Id.* Since *Sirhan et al.* does not disclose a bonding region wherein the outside wall surface of the inner tube is bonded to the outside wall surface of the outer tube by re-flow of the two outer wall surfaces, Applicants respectfully submit that *Sirhan et al.* does not anticipate the claimed invention. As such, Applicants respectfully submit that claim 49 is in condition for allowance.

Because claim 49 is allowable, dependent claims 50-55 and 61-64 are allowable for the reasons stated above, and since they add significant elements to distinguish them from the prior art.

### 35 U.S.C. § 103 Rejections

Claims 56, 67, 69 and 73 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Sirhan et al.* in view of *Fontiroche et al.* (U.S. Patent No. 5,538,510).

Claims 57, 66, 68, 70 and 74 were rejected under 35 U.S.C. § 103(a) as being

unpatentable over Sirhan et al. in view of Fontirroche et al. as applied to claims 56, 65, 69, 71 and 73 above, and further in view of Berg et al. (U.S. Patent No. 5,792,116).

Claim 58 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Sirhan et al. in view of Javier, Jr. et al. (U.S. Patent No. 6,093,177).

Claims 59, 65, and 71 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sirhan et al. in view of Javier, Jr. et al. as applied to claim 58 above and further in view of Fontirroche et al.

Claims 60 and 72 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sirhan et al. in view of Javier, Jr. et al., further in view of Fontirroche et al. as applied to claim 59, and further in view of Berg et al.

Applicants respectfully traverse these rejections. To establish a *prima facie* case of obviousness, the prior art references must teach or suggest *all* of the limitations in the claimed invention. See MPEP § 2142. As discussed above, claim 49 of the claimed invention recites a bonding region distinguishable from that disclosed or suggested in *Sirhan et al.* This bonding region includes the outside wall surface of the inner tube bonded to the outside wall surface of the outer tube. Since the other cited prior art references, neither alone nor in combination with *Sirhan et al.*, disclose or suggest this characteristic of Applicants' claimed invention, it is respectfully asserted that these claims are in condition for allowance.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current Amendment. The attached page is captioned "Version with markings to show changes made."

Reexamination and reconsideration are respectfully requested. It is respectfully submitted that the claims are now in condition for allowance, issuance of a Notice of Allowance

in due course is requested. If a telephone conference might be of assistance, please contact the undersigned attorney at (612) 677-9050.

Respectfully submitted,

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By their Attorney,

Date: Jan. 8, 2001

  
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Serial No. 09/178,126

Version with Markings to Show Changes Made

In the Claims:

Claim 49 has been amended as follows:

49. (Twice Amended) A catheter shaft comprising:

a first tube including an inflation lumen in fluid contact with a dilation balloon, an inside wall surface, [and] an outside wall surface, and a first tube length, said first tube having an orifice in a portion of said first tube;

a second tube inserted through, and extending distally from, said orifice inside said inflation lumen, said second tube having a length, a lumen therethrough, a proximal portion, an inside wall surface and an outside wall surface; and

a bonding region wherein said second tube outside wall surface is bonded to said first tube outside wall surface by re-flow of the first and second tube outside wall surfaces, said second tube inside wall surface being formed of a second, lubricious material for a majority of said second tube length, said first tube wall having a layer of a first, flexible material extending for a majority of said first tube length, said first material being different from said second material.